

What is claimed is:

1. An optical transmission line comprising:

an optical transmission fiber having a chromatic dispersion of +4 to +10 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ and a dispersion slope of 0 to +0.04 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$ at the 1550 nm wavelength and installed in a relay section; and

a module made of a dispersion compensating optical fiber having a chromatic dispersion of -40 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or less and a dispersion slope of -0.10 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$ or less at the 1550 nm wavelength.

2. An optical transmission line according to Claim 1, wherein said optical transmission fiber has a dispersion slope of +0.01 to +0.03 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$.

3. An optical transmission line according to Claim 1, wherein said optical transmission fiber has an effective area of $45 \mu\text{m}^2$ or more at the 1550 nm wavelength.

4. An optical transmission line according to Claim 1, wherein said dispersion compensating optical fiber has a chromatic dispersion of -80 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or less and a dispersion slope of -0.20 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$ or less.

5. An optical transmission line according to Claim 4, wherein said dispersion compensating optical fiber has a chromatic dispersion of -100 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or less.

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6. An optical transmission system comprising:

an optical transmission fiber having a chromatic dispersion of +4 to +10 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ and a dispersion slope of 0 to +0.04 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$ at the 1550 nm

5 wavelength and installed in a relay section;

a module made of a dispersion compensating optical fiber having a chromatic dispersion of -40 $\text{ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or less and a dispersion slope of -0.10 $\text{ps} \cdot \text{nm}^{-2} \cdot \text{km}^{-1}$ or less at the 1550 nm wavelength;

a transmitter; and

10 a receiver.

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